

REMARKS

Applicants have the following response to each of the Examiner's rejections the Office Action.

Claim Rejections - 35 USC §112

In the Office Action, the Examiner rejects Claims 1-3, 6-7 and 22-28 under 35 USC §112, second paragraph, for insufficient antecedent basis for the term "from the below."

In order to advance the prosecution of this application, Applicants are amending independent Claims 1-3 and 6-7 to change "from the below" to "from below." The undersigned had a telephone conference with the Examiner regarding this issue. The Examiner agreed that this amendment corrects the antecedent basis issue and overcomes the Examiner's objection.

Accordingly, it is respectfully requested that this rejection be withdrawn.

Claim Rejections - 35 USC §102/103

In the Final Rejection, the Examiner rejects Claims 1, 3, 6-7 and 24-28 under 35 USC §102(e) as being anticipated by Miyazawa (U.S. 2003/0166311). The Examiner also has the following rejections under 35 U.S.C. §103:

1. Claims 2 and 22-23 are rejected as being unpatentable over Miyazawa.
2. Claims 1-3, 6-7 and 22-28 are rejected as being unpatentable over Kimura et al. (U.S. 2002/0075422) in view of Kawase (GB 2,360,489) and McCormick (U.S. 6,593,690).
3. Claims 1-3, 6-7 and 22-28 are rejected as being unpatentable over Miyazawa (U.S. 2003/0166311) in view of Kimura.
4. Claims 10-11 and 22-28 are rejected as being unpatentable over Kimura in view of Kawase and McCormick and further in view of Miyashita et al. (U.S. 2002/0155215). Claims 10-11 and 22-28 are rejected as being unpatentable over Miyazawa in view

of Kimura and further in view of Miyahashi.

5. Claims 16-17 and 22-28 are rejected as being unpatentable over Kimura in view of Kawase and McCormick and further in view of Yamazaki (U.S. 2002/0164416).
6. Claims 16-17 and 22-28 are rejected as being unpatentable over Miyazawa in view of Kimura and further in view of Yamazaki.
7. Claims 14-15 are rejected as being unpatentable over Kimura in view of Kawase, McCormick and Miyashita and further in view of Konuma et al. (U.S. 2002/0030443).
8. Claims 14-15 are rejected as being unpatentable over Miyazawa in view of Kimura and Miyashita and further in view of Konuma.
9. Claims 20-21 are rejected as being unpatentable over Kimura in view of Kawase, McCormick and Yamazaki and further in view of Konuma.
10. Claims 20-21 are rejected as being unpatentable over Miyazawa in view of Kimura and Yamazaki and further in view of Konuma.

Each of these rejections is respectfully traversed.

§102 Rejection and §103 Rejection No. 1

In the §102 Rejection and §103 Rejection No. 1 above, the Examiner rejects the claims over Miyazawa as the sole reference. These rejections are respectfully traversed.

More specifically, with regard to the §102 rejection and the §103 rejection no. 1 listed above, while Applicants traverse these rejections, in order to advance the prosecution of this application, Applicants are amending independent Claims 1 and 3 to recite the feature of “ejecting a solution containing a light-emitting body composition from below toward an anode or a cathode facing downward under a pressure lower than atmosphere pressure.” Independent Claim 2 has been amended in a similar manner. In addition, Applicants are amending independent Claims 6 and 7 to recite the features of “setting up an anode or a cathode facing downward...” and “ejecting a solution

containing a light-emitting body composition from below under a pressure lower than atmosphere pressure.”

The above features are shown, for example, in Fig. 1A and the accompanying text in the specification of the present application.

In contrast, as shown in for example Fig. 5(a) in Miyazawa, Miyazawa discloses ejecting a solution from above (upper, see e.g. 3a) toward a pixel electrode (see e.g. 141) facing upward. Therefore, Miyazawa does not disclose or suggest the above amended claimed features, and independent Claims 1-3, 6 and 7 are not disclosed or suggested by Miyazawa.

Accordingly, independent Claims 1-3, 6 and 7 and those claims dependent thereon are patentable over Miyazawa, and it is respectfully requested that the §102 rejection over Miyazawa and the §103(a) rejection over Miyazawa as a sole reference be withdrawn.

§103 Rejection Nos. 2, 4, 6, 8, and 10

In the §103 Rejection Nos. 2, 4, 6, 8, and 10 above, the Examiner rejects the claims over Kimura in view of Kawase and McCormick (and additional tertiary references in some of the rejections). These rejections are also respectfully traversed.

More specifically, the Examiner contends that Kimura teaches a method of making an EL display device, and that in the embodiment of Fig. 8, an EL solution 114A is ejected towards the pixel electrode 141, wherein the pixel electrode is turned to face downward [0170]. The Examiner admits that Kimura “does not explicitly teach ejecting under a pressure lower than atmosphere pressure.” The Examiner then cites Kawase and contends that Kawase teaches that a flow of gas across the substrate and heating of the substrate during deposition can increase the drying speed in order to form a uniform EL layer, but does not explicitly teach the use of a vacuum.” The Examiner

then cites McCormick and contends that McCormick teaches “applying a vacuum is an operable equivalent of applying heat in the method of increasing drying speed (col. 6, lines 47-51). The teachings of McCormick would have presented a recognition of equivalency in the prior art and would have presented strong evidence of obviousness in substituting one method for the other in a process of evaporating a solvent. The substitution of equivalents requires no express suggestion.”

Applicants respectfully disagree with this argument and respectfully submit that even if each of these references were combined (which Applicants do not admit is proper), the combination still does not disclose or suggest the claimed invention.

In particular, McCormick at col. 6, lines 47-51 state “[a]fter the buffer layer has been applied, it should be dried to remove the coating solvent (e.g., water). The buffer layer may be dried by exposure to ambient conditions. Faster drying times may be achieved by, e.g. applying heat, applying inert gas, or applying a vacuum” (emphasis added). Hence, the drying occurs after the buffer layer has been applied. Therefore, even if the buffer layer is regarded as an EL layer (which Applicants do not admit), the EL solution is dried by heating or applying a vacuum after the EL solution has been applied.

In contrast, the claimed invention recites ejecting a solution under a pressure, at for example, lower than atmosphere pressure. As explained, for example, in Embodiment Mode 1 in the specification of the present application, with this claimed feature, the method of the present invention can achieve that the ejected solution travels while volatilizing the solvent under the reduced pressure. This claimed feature and effect are not disclosed or suggested in Kimura, Kawase, and/or McCormick.

Therefore, independent Claims 1-3, 6, 7, 10, 11, 16 and 17 are not disclosed by Kimura, Kawase, and McCormick, and Claims 1-3, 6, 7, 10, 11, 16 and 17 and those claims dependent

thereon are patentable over the cited references. Accordingly, it is respectfully requested that the §103 rejection nos. 2, 4, 6, 8 and 10 above be withdrawn

§103 Rejections 3, 5, 7, 9 and 12

In the §103 Rejection Nos. 3, 5, 7, 9, and 11 above, the Examiner rejects the claims over Miyazawa in view of Kimura (and additional tertiary references in some of the rejections). These rejections are also respectfully traversed.

While Applicants traverse these rejections, as explained above, in order to advance the prosecution of this application, Applicants are amending independent Claims 1-3, 6 and 7. Independent Claims 10, 11, 16 and 17 have also been amended in a similar manner. As amended, each of these claims includes the feature of ejecting a solution from below toward an anode or a cathode facing downward under a pressure, such as for example, lower than atmosphere pressure.

As explained above, Miyazawa discloses ejecting a solution from above toward a pixel electrode facing upward. Therefore, Miyazawa does not disclose or suggest this claimed feature.

The Examiner also cites Kimura. As explained above, Kimura does not disclose or suggest ejecting a solution under a vacuum.

Applicants respectfully submit that there is no reason, teaching, suggestion, or motivation to combine these references, other than the claims of the present application which would be improper hindsight reconstruction. Further, no reason, teaching, suggestion, or motivation for combining these references has been provided in the Office Action. Therefore, this rejection is improper.

Accordingly, independent Claims 1-3, 6, 7, 10, 11, 16 and 17 and those claims dependent thereon are patentable over these references, and it is respectfully requested that the §103 Rejection Nos. 3, 5, 7, 9, and 11 above be withdrawn.

Conclusion

It is respectfully submitted that the present application is in a condition for allowance and should be allowed.

If any fee should be due for this amendment and/or extension of time, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

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Respectfully submitted,

/Mark J. Murphy/

Mark J. Murphy

Registration No. 34,225

COOK, ALEX, McFARRON, MANZO,
CUMMINGS & MEHLER, Ltd.
200 West Adams Street, Suite 2850
Chicago, Illinois 60606
(312) 236-8500

Customer No. 26568